

### **POLE DETAILS**

## STRAIN POLE

CITY OF COLUMBUS, OHIO DEPARTMENT OF PUBLIC SERVICE DIVISION OF DESIGN AND CONSTRUCTION

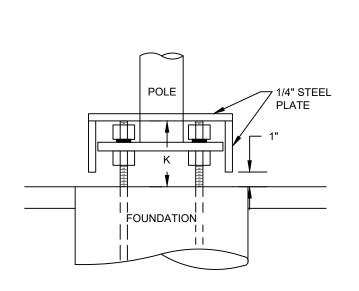
CITY ENGINEER

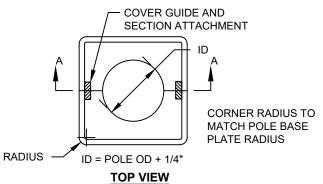
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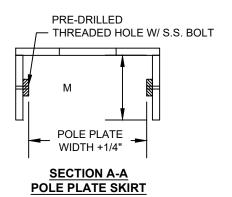
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## STEEL BASE COVER

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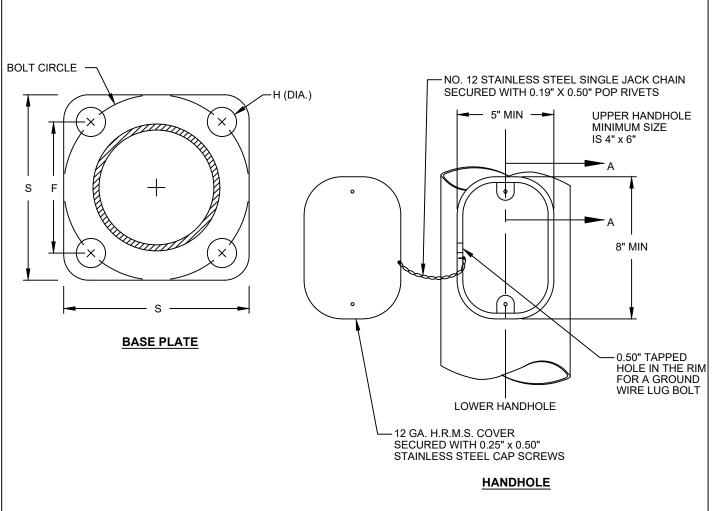
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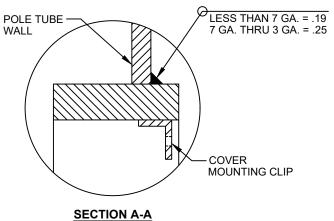
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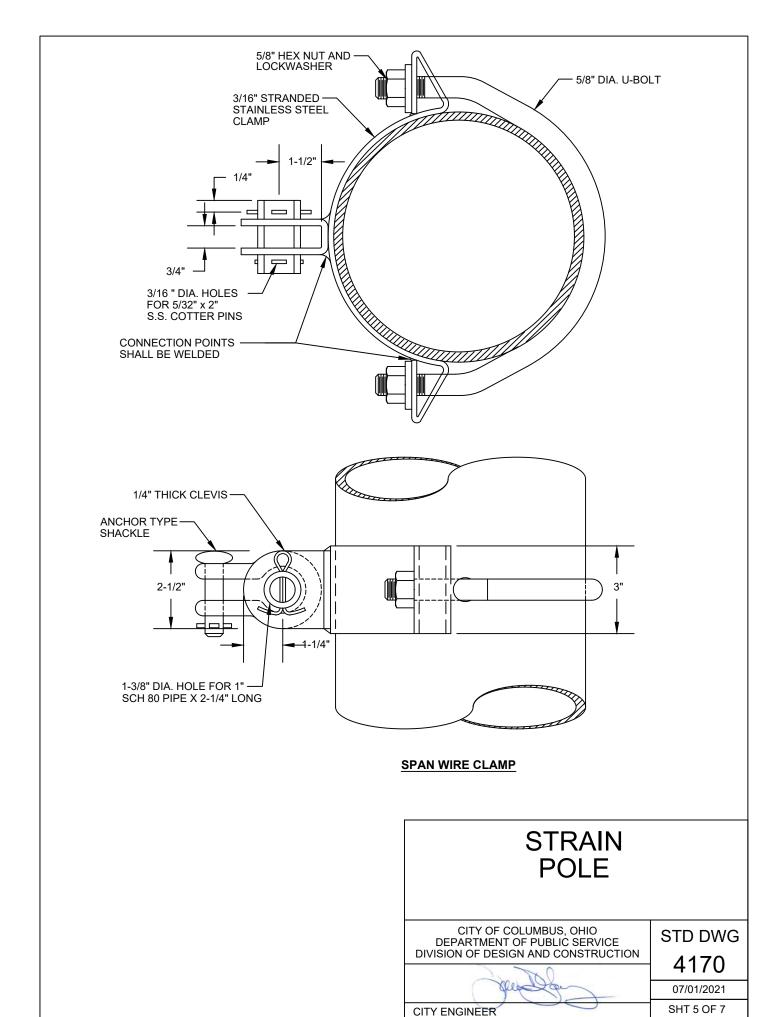
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#### ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE NOTED.

DESIGN NO.	BASE MOMENT AT YIELD (ft. kips)	TAPERED (NOTE A)		TAPERED (NOTE B)			ANCHOR BASE					PLATE SKIRT		MESS-
		BASE DIA.	MIN. WALL THICKNESS	BASE DIA.	MIN. WALL THICKNESS	NO. SIDES	BOLT CIRCLE	F	s	Т	Н	М	К	ENGER WIRE SIZE
5	121.0	12	.239	12.00	.239	N/A	16.0	11.3125	17.0	2.0	2.125	6.75	7.75	3/8
6	149.0	12	.299	12.00	.250	10	16.0	11.3125	17.0	2.0	2.125	6.75	7.75	3/8
7	176.0	13	.299	13.00	.250	12	18.0	12.7500	18.5	2.0	2.375	7.50	8.50	3/8
8	206.0	14	.299	15.00	.219	14	20.0	14.1250	20.5	2.0	2.375	7.50	8.50	3/8
9	228.0	12	.478 (2 PLY)	14.75	.250	14	22.0	15.5000	23.0	2.5	2.375	7.50	8.50	7/16
10	270.0	13	.478 (2 PLY)	16.00	.250	16	22.0	15.5000	23.0	2.5	2.625	8.00	9.00	7/16
11	316.0	14	.478 (2 PLY)	15.50	.313	14	22.0	15.5000	23.0	2.5	2.625	8.00	9.00	7/16
12	385.0	14	.598 (2 PLY)	17.25	.313	16	23.5	16.6250	24.5	2.5	2.875	8.75	9.75	1/2
13	590 <sup>C</sup>	18	.626	18.00	.500	14	26.0	18.3800	30.0	3.5	3.375	10.75	11.75	1/2
14	900 <sup>C</sup>	23	.563	22.00	.500	16	34.0	24.0400	36.5	3.5	3.375	10.75	11.75	1/2

#### NOTES:

- A. TAPERED TUBE SHALL BE STEEL WITH A MINIMUM OF 55,000 PSI YIELD STRESS AFTER GALVANIZING.
- B. DESIGN 5 SHALL BE ASTM A595M STEEL WITH A MINIMUM OF 55,000 PSI YIELD STRENGTH AFTER GALVANIZING. DESIGNS 6 THRU 14 SHALL BE ASTM A572M GRADE 55 OR 65 STEEL WITH A MINIUM OF 55,000 OR 65,000 PSI YIELD STRENGTH AFTER GALVANIZING, RESPECTIVELY.
- C. MAX. DESIGN BASE MOMENT; DESIGN 13 AND 14 STRAIN POLES ARE AASHTO 1994 COMPLIANT.

# STRAIN POLE

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#### NOTES:

- 1. SIGNAL CABLE ENTRANCE SHALL BE A 2" MINIMUM BLIND HALF COUPLING PROVIDED IN EACH POLE ON CORNERS WITHOUT CABINET. MINIMUM OF 3" BLIND HALF COUPLING ON CORNER WITH CABINET OR AS SPECIFIED ON THE PLANS.
- SPAN WIRE CLAMP SHALL BE GALVANIZED STEEL, CAPABLE OF RESISTING A LOAD OF 12,500 POUNDS MINIMUM WITHOUT PERMANENT DISTORTION.
- 3. FOR FOUNDATION DETAILS, INCLUDING ANCHOR BOLT DETAILS, SEE CITY OF COLUMBUS STANDARD CONSTRUCTION DRAWING 4160.
- 4. THE BASE PLATE SHALL BE WELDED TO TWO PLY POLES WITH AWS PREQUALIFIED WELDS IN CONFORMANCE WITH 730.04.
- 5. A MINIMUM OF ONE FULL BOLT THREAD SHALL REMAIN ABOVE THE ANCHOR NUT.
- ALL UNUSED COUPLINGS SHALL BE PROVIDED WITH A REMOVABLE GALVANIZED CAST IRON PLUG.
- 7. PROVIDE 1 OR 2 WELDED CABLE SUPPORT HOOKS ('J' OR 'C' HOOKS) LOCATED ON THE INSIDE OF THE POLE.
- 8. STRAIN POLES SHALL BE COATED IN ACCORDANCE WITH THE PLANS.
- 9. PROVIDE 1, 2 OR 3 HANDHOLES, AS PER PLAN DESIGN, EACH COMPLETE WITH A COVER, A RECTANGULAR OR ELLIPTICAL REINFORCED FRAME, AND A STAINLESS STEEL FASTENER FOR THE COVER. THE FASTENER SHALL BE FLUSH WITH THE HANDHOLE SURFACE. THE HANDHOLES SHALL BE LOCATED 180 DEGREES FROM THE RESULTANT FORCE UNLESS SPECIFIED OTHERWISE.
  - A.) THE HAND HOLE NEAR THE BRACKET ARM SHALL HAVE A MINIMUM INSIDE OPENING OF 3" X 5" AND BE SIMILAR IN DESIGN TO THE BOTTOM HAND HOLE EXCEPT THAT NO GROUNDING PROVISION IS REQUIRED.
  - B.) THE HAND HOLE NEAR THE SPAN WIRE ATTACHMENT POINT SHALL HAVE A MINIMUM INSIDE OPENING OF 4" X 6" AND BE SIMILAR IN DESIGN TO THE BOTTOM HAND HOLE EXCEPT THAT NO GROUNDING PROVISION IS REQUIRED.
  - C.) THE BOTTOM HAND HOLE SHALL HAVE A MINIMUM INSIDE OPENING OF 5" X 8". A GROUNDING PROVISION CAPABLE OF ACCEPTING 4 #4 AWG COPPER GROUNDING WIRES SHALL BE PROVIDED AND SHALL BE ATTACHED TO THE FRAME.
- 10. PROVIDE A REMOVABLE POLE CAP ATTACHED EITHER BY A MINIMUM OF 3 STAINLESS STEEL SET SCREWS OR BY A STAINLESS STEEL THROUGH BOLT.
- 11. FOR BRACKET ARM DETAILS SEE CITY OF COLUMBUS STANDARD DRAWING 4110.

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